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# Legibility of Alphanumeric Characters and Other Symbols

I. A Permuted Title Index and Bibliography

3458

United States Department of Commerce

National Bureau of Standards
Miscellaneous Publication 262-1

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## Legibility of Alphanumeric Characters and Other Symbols

### I. A Permuted Title Index and Bibliography

D. Y. Cornog, F. C. Rose, and J. L. Walkowicz



National Bureau of Standards Miscellaneous Publication 262-1

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## LEGIBILITY OF ALPHANUMERIC CHARACTERS AND OTHER SYMBOLS: I. A PERMUTED TITLE INDEX AND BIBLIOGRAPHY

Douglas Y. Cornog F. Clayton Rose Josephine L. Walkowicz

This permuted title index and bibliography to the literature on the legibility of alphanumeric characters and other symbols includes 325 references. Due to the confusion and overlap of terminology in the legibility literature, this report uses the term
"legibility" to include "legibility,"
"readability," "perceptibility," "visibility"
and any other closely related concepts. "Other symbols" include such items as the arrows and other coded symbols used to present information on radar displays. The psychological literature on perception has been included only when it was closely involved with the specific problems of alphanumeric characters and other meaningful symbols. Studies concerned with environmental variables, i.e. illumination and symbol-background contrast, and the legibility of dials and scales have received little attention. An author index is included.

#### INTRODUCTION

This report is the first of several related reports on the subject of the legibility of alphanumeric characters and other meaningful symbols. The permuted title index will serve both the present extended bibliography and the future report of selected information abstracts from the legibility literature. These reports are from the legibility project in the Research Information Center and Advisory Service on Information Processing (RICASIP). RICASIP is part of the Information Technology Division, Institute for Applied Technology, National Bureau of Standards (NBS), and is jointly supported by NBS and the National Science Foundation.

In the legibility literature, there is much confusion and overlap in the usage of the terms legibility, readability, perceptibility and visibility. For the

purposes of this report, the term legibility is considered to include these and any closely related concepts. In general, legibility refers to the characteristics of printed, written or other displayed meaningful symbolic material which determine the speed and accuracy with which the material may be read or identified. The psychological literature on perception has been included only when it was closely involved with the specific problems of alphanumeric characters and other meaningful symbols. "Other symbols" include such items as the arrows and other coded symbols used to present information on radar displays. Studies concerned with environmental variables, i.e. illumination and symbol-background contrast, and the legibility of dials and scales have received little attention.

Permuted Title Index: Description and Use. In this permuted title index, the important words in each publication title are arranged alphabetically down a center column of each index page (pages 5-22). This is accomplished by shifting each title along the horizontal printing line so that each important word in the title has an opportunity to appear in the center column. All of the titles are then arranged so that the words in the central column appear in alphabetical order. An exclusion list is used to keep words from appearing in the central column when they are considered unimportant or not of subject interest. Non-English titles have been entered in English for index purposes, with the original foreign language title appearing in the bibliography.

Each title in the permuted title index is identified by an accession number which appears at both the right and left ends of each title line. Since the bibliography is arranged alphabetically by author, the cross-reference must be utilized to associate the title accession number with the appropriate bibliographic entry identification.

The permuted title index is used by looking in the alphabetic listing for important subject-related words of interest to the user. When a given word is located, its relationship to the title can be found by looking to the right or left of the center column. Access to the bibliography is found by using the cross-reference list to connect the title accession number with the bibliographic entry identification. An author index is also provided.

Mrs. Angela F. Guinn and Miss Carolyn E. Thomas, both of the Information Technology Division, prepared and converted the bibliographic data to computer input. Their contributions are gratefully acknowledged.

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Wulfeck, Joseph W.	Crook-1947a Crook-1947b Crook-1952 Wulfeck-1952
Young, Katherine D.	Young-1946

## Announcement of New Publications on Legibility of Alphanumeric Characters and Other Symbols

Superintendent of Documents Government Printing Office Washington, D. C. 20402

Dear Sir:

Please add my name to the announcement list of new publications to be issued as sections of: NBS Miscellaneous Publication 262 - Legibility of Alphanumeric Characters and Other Symbols.

Name	<del> </del>	
Company		
Address		
City	State	Zip Code
(Notification ke	ey N-333)	



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Gaithersburg, Maryland 20899-

November 17, 2011

Dear ,

The Defense Technical Information Center (DTIC) transferred to the National Institute of Standards and Technology (NIST) documents in response to your October 11 and October 15, 2011 Freedom of Information Act (FOIA) requests to DTIC.

This letter serves as NIST's final response to your requests for DTIC Report DTIC Report AD-453458 (DTIC FOIA numbers 2012-04 and 2012-05).

NIST has completed the review of the provided records and we are releasing in its entirety document AD453458, "Legibility of Alphanumeric Characters and Other Symbols, I. A Permuted Title Index and Bibliography" (attached).

is being returned to DTIC for processing.

Sincerely,

Cátherine S. Fletcher

Freedom of Information Act Officer

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Attachment

